

Title (en)

Method and apparatus for forming ingots of a semiconductor alloy.

Title (de)

Verfahren und Vorrichtung zur Herstellung von Stäben einer Halbleiterlegierung.

Title (fr)

Méthode et dispositif pour la formation de lingots d'un alliage semiconducteur.

Publication

EP 0042494 A1 19811230 (EN)

Application

EP 81103871 A 19810520

Priority

US 15228380 A 19800522

Abstract (en)

In connection with a method and an apparatus for controlled directional solidification of semiconductor alloys of at least two constituents the method comprises heating at least two different constituents so that they are combined in a liquid phase molten material of uniform composition with at least a portion of the molten material lying in a plane, and rapidly cooling at least a portion of the molten material so that a planar solidification front passes rapidly through at least a portion of the molten material in a direction perpendicular to the plane until at least a portion of the molten material is rapidly solidified. The apparatus comprises a vessel (13) for containing the constituents (22) of the alloy, the vessel having an interior planar surface (20). Also included is heating apparatus (35,40) for heating the constituents in the vessel so that a liquid phase molten material of uniform composition is formed. The apparatus further comprises cooling apparatus (71-73) for rapidly supplying uniform cooling to the interior planar surface in order to cause rapid solidification in at least a portion of the molten material, whereby a planar solidification front passes rapidly through at least a portion of the molten material in a direction perpendicular to the interior planar surface of the vessel.

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IPC 8 full level

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CPC (source: EP)

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Citation (search report)

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- Japanese Journal of Applied Physics Vol. 11, No. 2, February 1972, K. SHINOHARA et al. "The Crystal Growth of Homogeneous Hg_{1-x}Cd_xTe by the Bridgman Method" pages 273-274. * page 283, figure 2 *
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